

WHAT IS CLAIMED IS:

5301 1. A control pedal assembly comprising, in combination:
a pair of control pedals, each of the pair of control pedals having a first support member, an adjustment member and a second support member;
a motor connected to the adjustment member and adapted to move the second support member relative to the first support member;
a sensor located on at least one of the pair of control pedals, the sensor sensing the movement of the second support member relative to the first support member; and
a controller member in communication with the sensor to receive signals from the sensor, wherein the controller member is adapted to stop the motor when signals from the sensor indicate that the second support member is not moving relative to the first member.

5302 2. The control pedal assembly as claimed in 1, wherein the controller member moves the second support member to a predetermined position when predetermined conditions are met.

5303 3. The control pedal assembly as claimed in claim 2, wherein the predetermined conditions include one of an ignition switch turned off, an open door, trunk lid open, a manual switch and a memory device.

5304 4. The control pedal assembly as claimed in claim 2, wherein the predetermined position is a forward position.

5305 5. The control pedal assembly as claimed in claim 1, wherein the controller member further includes a control device in communication with the controller member and adapted to prevent movement of the second support member relative to the first support member when engaged.

6. The control assembly as claimed in claim 1, wherein the controller member is adapted to automatically move the second support member in a forward direction relative to the first support member to a predetermined position when predetermined conditions are met.

7. The control pedal assembly as claimed in claim 1, further comprising, in combination:

a second sensor located on the other of the pair of control pedals, the controller member is adapted to determine the position of each of the pair of control pedals based on signals from the sensors to automatically stop the motor when a predetermined fore-aft relationship between the one and other of the pair of control pedals has not been maintained.

8. A control pedal assembly comprising, in combination:

first and second control pedals, each control pedal comprising a first support, a screw secured to the first support, a nut threadably engaging the screw and adapted to axially move along the screw upon rotation of the screw, and a second support operatively connected to the nut for fore-aft movement of the second support relative to the first support upon axial movement of the nut along the screw; and

a control system including at least one motor operatively connected to the screws to selectively rotate the screws and axially move the nuts along the screws, a sensor carried by one of the first control pedal and the second control pedal, to sense rotation of one of the motor and the screw, and a controller in communication with the sensor to receive signals from the control device.

9. The control pedal assembly as claimed in claim 8, wherein the controller is adapted to automatically stop the motor when signals from the sensor indicates that at least one of the motor and the screw is not rotating.

10. A control pedal comprising, in combination:
a first support;

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a screw secured to the first support;
a nut threadably engaging the screw and adapted to move axially along the screw upon rotation of the screw;
a motor operatively connected to the screw to selectively rotate the screw;
a second support operatively connected to the nut for fore-aft movement of the second support relative to the first support upon axial movement of the nut along the screw; and
a control system including a sensor adjacent one of the first support and the second support, to sense movement of the second support relative to the first support and a controller in communication with the sensor to receive signals from the sensor.

11. The control pedal according to claim 10, wherein the sensor is selected from the group of a Hall effect device, an inductance sensor, a potentiometer, and an encoder.

12. The control pedal according to claim 10, wherein the controller is adapted to determine a position of the second support relative to the first support based on signals from the sensor and to automatically stop the motor when the second support reaches a predetermined position relative to the first support.

13. The control pedal according to claim 12, wherein the controller is adapted to determine a position of the second support based on signals from the sensor and to automatically stop the motor when the second support reaches a desired end of travel relative to the first support.

14. The control pedal according to claim 10, wherein the controller is adapted to automatically stop the motor when signals from the sensor indicate that the second support is not moving relative to the first support.

15. The control pedal according to claim 10, wherein the controller is adapted to automatically move the second support in a forward direction relative to the first support to a predetermined position when predetermined conditions are met.

16. The control pedal according to claim 10, wherein the control system further includes a control device in communication with the controller and adapted to prevent movement of the second support relative to the first support when engaged.

17. The control pedal according to claim 10, wherein the sensor senses rotation of the one of the motor and the screw.

18. The control pedal assembly according to claim 10, wherein one of the first support and the second support carrying a pedal.

19. A control pedal comprising, in combination:

- a first support;
- a screw secured to the first support;
- a nut threadably engaging the screw and adapted to move axially along the screw upon rotation of the screw;
- a motor operatively connected to the screw to selectively rotate the screw and axially move the nut along the screw;
- a second support operatively connected to the motor for fore-aft movement of the second support relative to the first support upon axial movement of the screw;
- a motor operatively connected to the screw to selectively rotate the screw and axially move the nut along the screw;
- a sensor located to directly sense the movement of the first support relative to the second support; and

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a controller in communication with the sensor to receive signals from the sensor, wherein the controller is adapted to automatically stop the motor when signals from the sensor indicate that the first support is not moving relative to the second support.

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20. The control pedal according to claim 19, wherein the sensor is located near one of the first support and the second support to sense relative movement therebetween.

21. A control pedal assembly comprising, in combination:

first and second control pedals, each control pedal including a first support, a screw secured to the first support, a nut threadably engaging the screw and adapted to axially move along the screw upon rotation of the screw, and a second support operatively connected to the nut for fore-aft movement of the second support relative to the first support upon axial movement of the nut along the screw; and

a control system including at least one motor operatively connected to the screw on one of the first support and the second support to selectively rotate the screw and axially move the nut along the screw, at least one sensor carried by one of the first control pedal and the second control pedal to sense rotation of the screw of one of the first control pedal and the second control pedal, and a controller in communication with the control device to receive signals from the sensor;

wherein the screws of the first and second control pedals are operatively connected to the motor in series such that the screw of the second control pedal is connected to the motor and the screw of the first control pedal is connected to the screw of the second control pedal.

22. The control pedal assembly according to claim 21, wherein the control system having another sensor located near the screw of the other of the second control pedal and adapted to directly sense rotation of the screw of the other of the second control pedal.

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23. A control pedal assembly comprising, in combination:

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first and second control pedals, each control pedal including a first support, a screw secured to the first support, a nut threadably engaging the screw and adapted to axially move along the screw upon rotation of the screw, and a second support operatively connected to the nut for fore-aft movement of the second support relative to the first support upon axial movement of the nut along the screw; and

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a control system including at least one motor operatively connected to the screws to selectively rotate the screws and axially move the nuts along the screws, a sensor located adjacent to one of the second control pedal and the first control pedal, and a controller in communication with the sensor to receive signals from the sensor, wherein the controller is adapted to determine the position of the second support relative to the first support based on signals from the sensor and to automatically stop the motor when the position of the second support relative to the first support indicates that a predetermined fore-aft relationship between the first and the second control pedals has not been maintained.

24. The control pedal assembly according to claim 23, wherein the sensor is at least partially secured to one of the first adjustable control pedals and the second adjustable control pedals for movement therewith.

25. The control pedal assembly according to claim 23, wherein the sensor is selected from the group of a Hall effect device, an inductance sensor, a potentiometer, and an encoder.

26. The control pedal assembly according to claim 23, wherein the sensor is located near the screw of one of the first adjustable control pedal and the second adjustable control pedal, to directly sense rotation of the screw.

27. A control pedal assembly comprising, in combination:

first and second adjustable control pedals, each adjustable control pedal comprising a first support, a rotatable screw secured to the first support, a nut threadably engaging the screw and adapted to axially move along the screw upon rotation of the screw, and a second support

operatively connected to the nut for fore-aft movement of the second support relative to the first support upon axial movement of the nut along the screw, the pedals of the first and second adjustable control pedals having a predetermined fore-aft relationship, which is desired to be maintained; and

a control system comprising at least one motor operatively connected to the screws to selectively rotate the screws and axially move the nuts along the screws so that the second supports move relative to the first supports, a sensor secured to one of the first adjustable control pedal and the second adjustable control pedal to indicate a position of the second support relative to the first support, wherein the sensor is operatively connected to the motor to stop rotation of the motor when the sensor indicates that the predetermined fore-aft relationship between the pedals has not been maintained.

28. The control pedal assembly according to claim 27, further comprising a controller in communication with the sensor to receive signals from the sensor, wherein the controller determines position of the nuts along the screw based on signals from the sensor.

29. The control pedal assembly according to claim 27, wherein one of the first support and the second support carrying a pedal.

30. The control pedal assembly according to claim 27, wherein the screws are operatively connected to the motor in series such that the screw of the second adjustable control pedal is connected to the motor and the screw of the first adjustable control pedal is connected to the screw of the second adjustable pedal.

31. The control pedal assembly according to claim 30, wherein one of the first support and the second support carrying a pedal.

32. A control pedal comprising, in combination:
a first support;

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a screw secured to the first support;
a nut threadably engaging the screw and adapted to axially move along the screw upon rotation of the screw;
a second support operatively connected to the nut for fore-aft movement of the second support relative to the first support upon axial movement of the nut along the screw;
a sensor adjacent to one of the first support and second support;
a motor operatively connected to the screw to selectively rotate the screw and axially move the nut along the screw; and
a controller in communication with the motor and the sensor and adapted to automatically operate the motor to move the second support in a forward direction relative to the first support to a predetermined position when predetermined conditions are met;
wherein the predetermined conditions includes at least one of an ignition switch turned off and an open door.

33. The control pedal according to claim 32, wherein the predetermined position is a full forward position.

34. The control pedal according to claim 33, wherein the predetermined conditions include both an ignition switch turned off and an open door.

35. The control pedal according to claim 32, wherein the predetermined conditions include both an ignition switch turned off and an open door.

36. A control pedal assembly comprising, in combination:
a first support;
a screw secured to the first support;
a nut threadably engaging the screw and adapted to axially move along the screw upon rotation of the screw;

a second support operatively connected to the nut for fore-aft movement of the second support relative to the first support upon axial movement of the nut along the screw;

a sensor adjacent to one of the first support and second support;

a motor operatively connected to the screw to selectively rotate the screw and axially move the nut along the screw; and

a control system connected to the sensor and comprising a lock-out switch adapted to be manually engaged and disengaged and operatively connected to the motor to prevent movement of the second support relative to the first support when the lock-out switch is engaged and to allow movement of the second support relative to the first support when the lock-out switch is disengaged.

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